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## **Role of AI and ML in Experimental Nuclear Physics**

Modern nuclear physics experiments produce data of unprecedented scale and complexity, making Artificial Intelligence (AI) and Machine Learning (ML) essential tools for effective experimental optimization and data analysis. AI and ML techniques now impact every stage of the experimental workflow—from detector calibration and real-time data reduction to event reconstruction and physics analysis. This talk will provide a comprehensive overview of how these computational techniques are being developed and deployed across high-energy nuclear science.

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